

PALS Chapter 5 (p.139: 31-40)

(Total: 32)

31. Arun's savings  5 units



Majid's savings  3 units

@2 Arun's savings is $\frac{5}{3}$ of Majid's savings



32. Cars  4 units

Vans  5 units

@2 Ratio of number of vans to the number of cars = $5:4$

33. John  2 units
Peter  3 units } total 5 units

@2 The ratio of number of sweets John ate to the total number of sweets they ate = $2:5$

34. rope  3 units
stick  1 unit

@2 the length of stick is $\frac{1}{3}$ times of the length of the rope.

35.



apple	cost
5	\$1.85
15	\$?

 The cost of 15 apples =

@3
$$\begin{array}{r} \$1.85 \times \frac{15}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 1.85 \\ \times 3 \\ \hline 5.55 \end{array}$$

$$= \$5.55$$

36. rice  2
chicken  5 } Total 7 units
350 g

She used $\frac{3}{7}$ of the total mass
$$= \frac{3}{7} \times 350g = 150g$$

or Chicken used = $350 \times \frac{5}{7} = 250g$
rice used = $350 \times \frac{2}{7} = 100g$
i.e. She used $(250-100g) = 150g$
more chicken than rice.

@5	37.	Sam has $96 \times \frac{8}{16} = 48$ marbles		Sam	Tanfik	Rita	Total
		Tanfik has $96 \times \frac{5}{16} = 30$ marbles	Old ratio	8	5	3	16
		Rita has $96 \times \frac{3}{16} = 18$ marbles		48	30	18	96
			New ratio	$48-8$	$30-8$	$18+8$	
		The new ratio will be		40	22	34	96

$$48-8 = 30-8 = 18+8$$

$$= 40 = 22 = 34$$

$$= 20 = 11 = 17$$

Simplify new ratio	20	11	17
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@3	38.	Mangoes : apple = pears	Mangoes : apple = pears
		3 = 4	or 3 : 4
		2 = 5	$2 \times (2 = 5) \times 2$
		6 = 8 = 20	4 = 10
		3 = 4 = 10	\therefore Mangoes : apple : pears

$$3 : 4 = 10$$

The number of pears is $\frac{10}{17}$ of the total

@5	39.	Motorcycle has 2 wheels	Car	Motor	Total
		Car has 4 wheels	No	$x+3$?
			wheel	$2(x+3)$	54
		From the given data as above:		$2x+6$	
		$4x + 2x + 6 = 54$	(when x is the number of car)		

$$6x + 6 = 54$$

$$6x = 48$$

$$x = 8$$

a) There are $8+3 = 11$ motorcycles

b) There are 8 cars

Case 1 (at first)

40	20¢	<div style="display: inline-block; width: 100px; height: 15px; border: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: 0; width: 100%; height: 100%; background-color: #f0f0f0;"></div> </div>	3x	} 10 units (Total)
	50¢	<div style="display: inline-block; width: 100px; height: 15px; border: 1px solid black; position: relative;"> <div style="position: absolute; left: 0; top: 0; width: 100%; height: 100%; background-color: #f0f0f0;"></div> </div>	7x	

Q 5.

Case 2 (After adding 20 coins to each)

Method 2

20¢	$3x + 20$	7	$7 - 3 \Rightarrow 4$
50¢	$7x + 20$	11	$11 - 7 \Rightarrow 4$

Let there are $3x$ 20¢ coins at first.
from the given data and above

$$\frac{3x + 20}{7x + 20} = \frac{7}{11}$$

$$(3x + 20)11 = 7(7x + 20)$$

$$33x + 220 = 49x + 140$$

$$49x - 33x = 220 - 140$$

$$16x = 80$$

$$x = 5$$

There are $3x = 3 \times 5 = 15$ 20¢ at first.

Method 2

The number of unit difference after 20 coins added is 4

i, 4 unit \rightarrow 20 coins

1 unit \rightarrow 5 coins

i, There are $5 \times 3 = 15$ 20¢ coins at first.

[illegible]